

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 16, line 5 with the following amended paragraph:

The mouse P53BP2 gene was cloned from the 129 SVJ phage genomic library. Exons were mapped. The targeting vector was constructed by using 1.3kb DNA fragment as the short arm, which was a PCR fragment from primers X23 to X22. Primer X23 is located about 130bp downstream of putative exon 1 inside intron 1 with a sequence of 5'-TGGGATGAAGGGAAGCTAGGAC-3' (SEQ ID NO: 1). Primer X22 is located 1.4kb further downstream of putative exon 1 inside intron 1 with a sequence of 5'-CTTTCTGTCCTATATCAACTC-3' (SEQ ID NO: 2). The long arm was made of a fragment from EcoRV to the end of the P53BP2 lambda genomic clone. In this knockout strategy, putative exon 1 and 2kb upstream sequence were replaced by the Neo gene cassette. Ten micrograms of the targeting vector was linearized by NotI and then transfected by electroporation of IT2 embryonic stem cells. After selection in G418, surviving colonies were expanded, and PCR analysis was performed to identify clones that had undergone homologous recombination. PCR was done using primer pair X25 and Neo1. Primer X25 is located 100bp downstream of primer X22 with a sequence of 5'-AGAGTGATCCTGTTCAACCTGTG-3' (SEQ ID NO: 3). Primer Neo1 is located in the 5'-promoter region of the Neo gene cassette and has a sequence of 5'-TGCGAGGCCAGAGGCCACTTGTGTAGC-3' (SEQ ID NO: 4). The positive clones will give rise to a 1.5kb PCR fragment. The correctly targeted ES cell lines were microinjected into C57BL/6J host blastocysts. The chimeric mice were generated and they gave germline transmission of the disrupted P53BP2 gene. To identify the wild-allele, primer pair X5 and X25 can be used. Primer X5 is located inside exon 1 with a sequence of 5'-CTTCTTTCTTCGTCATGAACG-3' (SEQ ID NO: 5). The PCR product should be around 1.5kb. In the homozygous knockout mice, this PCR band would not be amplified.

Please replace the paragraph beginning on page 17, line 1, with the following rewritten paragraph:

Total RNA was isolated from whole embryos by Trizol (GIBCO-BRL). Five micrograms of total RNA was reverse-transcribed using the superscript first-strand synthesis system (IN VITROGEN), and the resulting templates were subjected to a PCR reaction with ASPP2 specific primers (5'-ATTCAACCCCCTTGCTTTGCTG-3' (SEQ ID NO: 6) and 5'-CCCATCTTCTCCTGAACGCCA-3' (SEQ ID NO: 7)) or primers specific for p53 or GAPDH.